

## ON SIX NEW OR RARE QUEENSLAND FISHES.

BY J. DOUGLAS OGILBY.

(Plates XXI to XXIII.)

## POLYNEMIDÆ.

## POLYDACTYLUS MULTIRADIATUS (Günther).

*Polynemus multiradiatus* Günther, Brit. Mus. Catal. Fish., ii, 1860, p. 324.

(Plate XXI.)

Depth of body 2.75 to 2.94, length of head 3.3 to 3.45, of caudal fin 2.6 to 2.87, of pectoral 3.3 to 3.46, of upper free ray 2.81 to 3.03, of ventral 5.75 to 6.1 in length of body. Length of snout 3.95 to 4.35, diameter of eye 3.3 to 3.5, width of interorbit 4.1 to 4.4, length of maxillary 4.15 to 4.25, longest dorsal spine 1.5 to 1.56 in length of head.

Dorsal contour of body much more elevated than the ventral, its width 2.75 to 2.82 in its depth, which is greatest immediately in front of the anal fin and is one fifth more than the length of the head; caudal peduncle two fifths longer than deep, its least depth 2.33 to 2.44 in the depth of the body. Head moderate, with convex occipital profile, its width 2 to 2.1, its depth 1.33 to 1.4 in its length. Snout with linear or slightly convex upper profile, its anterior border linear and strongly declivous, 1.3 to 1.33 in the eye-diameter; interorbital region feebly convex, its width 1.2 to 1.4 in the same. Premaxillaries feebly emarginate; maxillary extending to a pupil-diameter behind the eye, the width of its distal extremity 3.43 to 3.56 in its length and much more than the depth of the preorbital, tip of mandible vertically below the anterior border of the eye. Vertical limb of preopercle evenly and finely denticulate, the lowermost tooth much stronger but scarcely longer than the others.

Scales in 7/59/12 series. Soft dorsal and anal fins with a wide basal scaly sheath; a pointed scale in the axils of the pectorals and ventrals, that of the latter the longer and narrowly lanceolate, about as long as the eye-diameter. Lateral line forked on the caudal fin, a branch extending on each lobe.

D. viii, i 14 or 15; A. iii 17 or 18; P. 15 + vii. Length of spinous dorsal 1.65 to 1.8 in the soft and 1.5 to 1.7 in the third spine, which is 1.2 to 1.3 in the height of the soft dorsal, the outer border of which is deeply emarginate, the last ray being

much longer than those preceding it. Caudal fin deeply forked with subequal pointed lobes, the middle rays 2.5 to 2.6 in the upper lobe. Anal originating slightly in advance of and one fifth to one third longer than the soft dorsal, the last spine 1.85 to 1.92 in the first ray; outer border obliquely truncated, the last ray but slightly produced. Pectoral as long as the head, the fourth ray longest, reaching to midway between the vent and the anal fin: upper free ray longest, reaching to the anal. Ventral 1.67 to 1.85 in the length of the head, reaching to beyond the vent.

Gill-rakers 13 + 18, the longest 1.56 in the eye-diameter.

Back and sides above the lateral line pale greenish yellow, sides and lower surface silvery. Snout golden brown; a well marked black supraciliary band; opercles iridescent bluish silvery. Fins pale brown, the first dorsal densely, the others more sparsely powdered with black.

Total length to 200 millim.

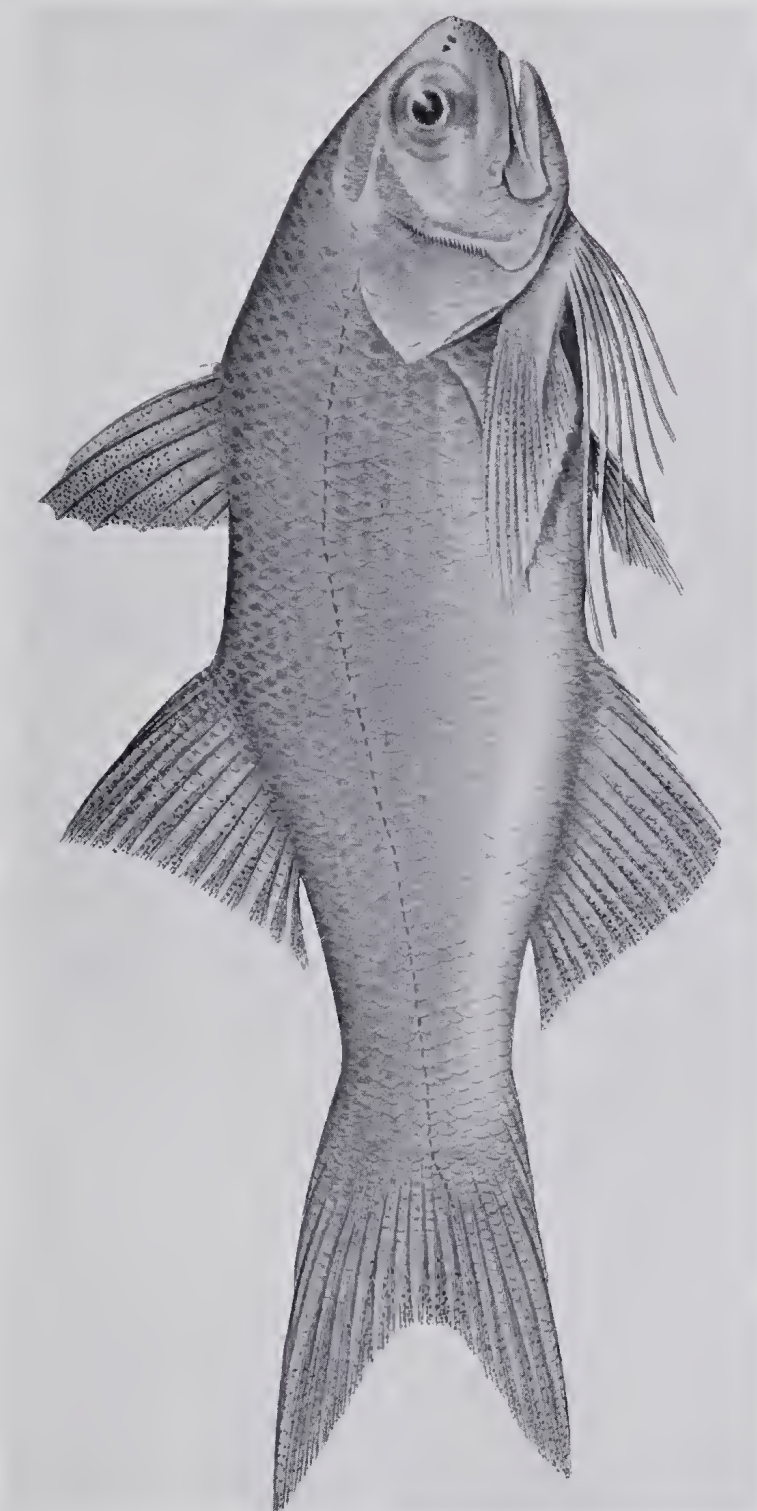
*Range*:—From the coast of China to Torres Strait (Thursday Island). Notwithstanding the fact that the species has not been recognised from any part of the Malay States or Archipelago, nor indeed been recorded from the Chinese Seas or elsewhere since Günther first described it more than half a century ago, I have no doubt as to the correctness of the identification, so far at least as Günther's meagre description (due as he himself tells us to "the specimen not being in very good condition, some parts being deformed by stuffing") goes.\* The fishes recorded by de Vis as follows "*Polynemus multiradiatus*, Gth., ascends the Brisbane River" appertains to *Polydactylus specularis* de Vis, that gentleman having been probably misled by the increased number of dorsal and anal rays common to the two species.

Described from two examples, measuring respectively 108 and 136 millim., collected at Thursday Island by Capt. Donald McDonald. Reg. No. in the Queensland Museum I. 13/1034.

The following key to the genera of the *Polynemidæ* may be usefully inserted here:—

- a*.<sup>1</sup> Preopercle entire; anal fin of about 30 rays, much longer than the second dorsal . . . . . i. *Polynemus*.
- a*.<sup>2</sup> Preopercle serrated; anal fin of 11 to 17 rays, about as long as the second dorsal.
- b*.<sup>1</sup> Vomer toothed.
- c*.<sup>1</sup> Scales moderate; free pectoral rays 3 to 9.
- d*.<sup>1</sup> Outer border of jaws rough; pectoral rays simple; no air-bladder . . . . . ii. *Eleutheronema*.
- d*.<sup>2</sup> Outer border of jaws smooth; pectoral rays divided; an air-bladder . . . . . iii. *Polydactylus*.
- c*.<sup>2</sup> Scales minute; free pectoral rays 14 . . . . . iv. *Polistonemus*.
- b*.<sup>2</sup> Vomer toothless . . . . . v. *Galeoides*.

\* See Note on p. 91.



POLYDACTYLUS MULTIRADIATUS (Günther).  $1\frac{7}{15}$  Nat. Size.

A. R. McCulloch, del.

## BOTHIDÆ.

## PLATOPHRYS PENNATA sp. nov.

Depth of body 1.88, length of head 3.66, of caudal fin 4.48 in length of body. Depth of peduncle 2.71, length of snout 4.22, diameter of eye 3.8, width of interorbit 11.87, length of maxillary 2.71, of mandible 2.37, height of dorsal 2.24, of anal 2.53, length of left pectoral 1.36, of left ventral 2.53 in length of head.

Body deeply ovate, the profile of the head from before the interorbital region evenly and strongly convex, as also is the snout in front of the rostrifrontal notch, which is deep. Mouth moderately arched, the jaws equal; mental knob little developed; maxillary extending to below the anterior border of the eye, the width of its truncate distal extremity 2.7 in its length. Lower eye about one third of its diameter in advance of the upper and a little longer than the snout; interorbital region reduced to a narrow mostly naked furrow, its width 3.12 in the eye-diameter.

Scales of colored side ciliated, arranged in 80 transverse series above the lateral line, and in 20 horizontal series between the dorsal fin and the summit of the arch; scales of blind side eyeloid; snout and mandibles naked; a few scales superiorly on the maxillary. Depth of lateral line arch 2.4 in its length; no subsidiary nuchal branch.

D. 91; A. 73; C. 17; P. 14/11; V. 6. Dorsal fin originating on the blind side of the snout in front of the rostrifrontal notch, the third ray expanded and pinniform, much longer than the second or fourth, slightly longer than the postmedian rays, and 2.1 in the length of the head. Caudal emeate. Left pectoral with the base oblique, the upper rays longest, reaching well beyond the lateral line arch; length of right pectoral 1.93 in that of the left, the middle rays longest. Ventrals long, that of the eyed side inserted on the abdominal ridge, its base longer than and originating well in advance of that of the right fin; left ventral subcontinuous with the anal, the middle rays longest, reaching the third anal ray.

Gill-rakers rather short, stout, and acute, smooth, 10 on the lower branch of the anterior arch, the upper branch entire, the longest one fifth of the eye-diameter and one half of the longest gill-fringes.

Light brown with three large blackish spots forming a triangle, one above and one below the middle of the appressed pectoral, the third on the lateral line about midway between the tip of the pectoral and the root of the caudal; body with several series of smaller and fainter spots, arranged in a more or less regular transverse pattern. Vertical fins with a somewhat obscure series of dusky blotches; pectoral with broad darker and lighter cross-bands.

Described from a single specimen, 170 millim. long, in the collection of the Amateur Fishermen's Association of Queensland.

## PLESIOPIDÆ.

## PHAROPTERYX MELAS (Bleeker).

*Plesiops melas* Bleeker, Verh. Batav. Gen., xxii, 1849, Bali, p. 9.

*Plesiops nigricans* var. *apoda* Kner, Sitzb. Akad. Wien, 1868, p. 54. Based on a specimen which had lost its ventral fins.

*Pharopteryx melas* Jordan and Seale, Bull. U. S. Bur. Fisher., xxv, 1906, p. 261, pl. xxxviii, fig. 3.

Depth of body 3.1 to 3.4, length of head 2.75 to 3, of caudal fin 3.5 to 4, of pectoral 3.9 to 4, of ventral 2.8 to 2.85 in length of body. Depth of peduncle 2.1 to 2.2, length of snout 4.5 to 4.8, diameter of eye 3.5 to 4, width of interorbit 7 to 7.33, length of maxillary 1.9 to 2, of mandible 1.66 to 1.85, last dorsal spine 2.2 to 2.4, last anal 2.33 to 2.6 in length of head.

Dorsal and ventral contour about equally convex; width of body 1.95 to 2.1 in its depth, which is 1.05 to 1.2 in the length of the head: caudal peduncle deeper than long, its least depth 1.8 to 2 in the depth of the body. Width of head a little less than its depth and 1.5 to 1.66 in its length, its upper profile from the forehead to the origin of the dorsal fin linear and but little acclivous. Snout short and blunt, its upper profile linear and rather strongly acclivous, forming an obtusely rounded angle with the frontal profile, its length 1.25 to 1.3, that of the flat interorbital width 1.8 to 2 in the eye-diameter; preorbital very narrow. Maxillary extending to below the hinder border of the eye, the width of its distal extremity 1.35 to 1.5 in the eye-diameter. Vertical limb of preopercle convex, the angle broadly rounded and feebly corrugated; opercular flap pointed.

Scales in 25 transverse series between the angle of the opercle and the root of the caudal, in 11 series in an oblique row from the vent forward to the dorsal ridge, 2 of which are above the lateral line. Lateral line tubes 19 or 20 in the upper line, 10 to 12 in the lower. Cheek-scales in 3 series.

D. x\* or xi 7; A. iii 8; P. 20 or 21. Dorsal fin originating above the base of the pectoral; first spine short, 2.65 in the last, which is 1.4 to 1.5 in the fifth and longest ray; rayed fin reaching beyond the base of the caudal. Anal originating below the seventh or eighth dorsal spine, its first spine 2.1 to 2.2 in the last, which is 1.66 to 1.85 in the fifth ray; soft portion similar to but higher than the dorsal rays, and just reaching to the caudal. Pectoral 1.3 to 1.4 in the length of the head, scarcely extending to above the vent. Ventral as long as or a little longer than the head, reaching to the second anal spine.

Gill-rakers 3 + 10, the longest 2.7 in the eye-diameter and as long as the gill-fringes.

Purplish brown, some of the scales occasionally gray usually with a dark central spot; sides and lower surface of head (except the anterior branchiostegals

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\* In one example the first short spine is missing.

which are blackish), throat and abdomen smoke-brown. Vertical fins purple, the dorsal edged with white, the width of the band diminishing from the front; pectorals uniform; outer soft ray of ventral dull blue, the others brown transversely barred with whitish undulæ.

Described from two specimens, 78 millim. long, collected at Masthead Island by Mr. H. A. Longman.

## CHEILODIPTERIDÆ.

### *AMIA NEMATACANTHA* sp. nov.

(Plate XXII, fig. 1.)

Depth of body 2.38, length of head 2.86, height of spinous dorsal 2.28, length of caudal 2.82, of pectoral 3.48, of ventral 4.83 in length of body. Length of snout 3.93, diameter of eye 2.36, width of interorbit 3.96, length of maxillary 2.04, height of soft dorsal 1.13, of anal 1.42 in length of head.

Body ovate and strongly compressed, the dorsal and ventral contours about equally rounded: caudal peduncle stout, its least depth 2.37 in the depth of the body. Upper profile of head undulous, the nape without median ridge. Snout with convex profile, its length 1.66, that of the convex interorbital width 1.7 in the eye-diameter; maxillary notched posteriorly, extending to below the middle of the eye. Inner limb of preopercle entire, outer serrulate at the angle and below.

D. vi. i 8. No procumbent dorsal spine; the four middle dorsal spines filamentous; the second longest reaching when laid back to beyond the base of the soft dorsal; spine of soft dorsal much stronger than those of the spinous dorsal, its length 1.55 in the first ray, which, with those that immediately succeed it, are also more or less filamentous. A. ii 9. Second anal spine, 1.34 in that of the soft dorsal and 1.66 in its first ray. Caudal fin deeply emarginate. Pectoral long, extending to beyond the vertical from the anal spines. Ventral long, 1.3 in the pectoral, not quite reaching to the anal.

Pale yellow; the head and anterior part of the body dotted with black (*νήμα*, gen. *νήματος*, thread; *ἄκανθα*, spine).

Total length of type 45 millim.

Six specimens of a small cheilodipterid, collected by Dr. J. R. Tosh at Darnley Island, were received, but unfortunately with two exceptions they were in bad condition. The best example has been chosen as the type, and is here described and figured. Reg. No. I. 13/1273. Queensland Museum Collection.

## FAMILY LEIOGNATHIDÆ.

*XYSZEMA DARNLEYENSE* sp. nov.

(Plate XXIII.)

Depth of body 2.4 to 2.65, length of head 2.9 to 3.2, longest dorsal spine 5 to 5.3, length of caudal 2.65 to 2.8, of pectoral 2.8 to 2.95, of ventral 4.95 to 5.4 in length of body. Length of snout 3 to 3.2, diameter of eye 3 to 3.15, width of interorbit 3.25 to 3.5, length of maxillary 2.8 to 3.25, of mandible 1.9 to 2.1, longest anal spine 2.5 to 2.75 in length of head.

Body subovate, the dorsal contour rather more arched than the ventral, which is somewhat flattened behind the ventral fins; width of body 2.35 to 2.4 in its depth, which is .15 to .3 more than the length of the head; caudal peduncle about one third longer than deep, its least depth 3.5 to 3.8 in the depth of the body and 2.8 to 3.2 in the length of the head. Head .15 to .25 longer than deep, its upper profile from the snout to the dorsal fin linear in small examples, becoming slightly convex on the nuchal region in the larger; lower profile concave and more declivous than the upper. Snout obtusely rounded, as long as the eye-diameter, which is .05 to .25 more than the convex interorbital width. Jaws equal; maxillary extending to below or a little beyond the anterior border of the eye, the width of its distal extremity 2.75 to 3.1 in its length. Preopercle entire.

Scales 6/47 to 50/13. Cheek-scales in three series; scales on the upper surface of the head extending forward laterally nearly to the nostrils, mesially to above the anterior border of the pupil, the premaxillary groove broad and naked, rounded behind; mandible naked. Accessory scale of ventral long and lanceolate, longer than the eye-diameter.

D. ix 10; A. iii 7. Dorsal originating above the insertion of the ventral; spines weak and flexible, the second longest, as long as or a little longer than the snout and eye, and 1.9 to 2.2 in the depth of the body below it; anterior soft ray equal to or a trifle longer than the fifth spine. Caudal deeply forked, the middle rays 3.4 to 4.4 in the upper lobe. Anal originating below fourth dorsal ray, the second spine somewhat stronger and a little longer than the third, which is subequal to the first ray. Pectoral pointed, reaching to or slightly beyond the origin of the anal, the seventh ray longest. Ventral inserted behind the base of the pectoral, the outer ray longest, reaching midway between its origin and the anterior anal rays; origin of ventral nearer to that of anal than to tip of mandible.

Gill-rakers short and stout, 7 on the lower branch of the anterior arch, the anterior the longest, 3.9 in the eye-diameter and 1.4 in the longest gill-fringes.

Silvery, the upper parts tinged with yellow; each scale above the lateral line with an obscure darker central spot, forming longitudinal bars, which follow the contour of the back; below the lateral line are five series of much larger oblong brick-red spots. Naked parts of head pale olive or grayish green. Posterior dorsal spines and all the rays except the last with a narrow oblique blackish basal spot; caudal



*XYSTOCEMA DARNLEYENSE* Ogilby. Drawn from Type :  $\frac{3}{4}$  Nat. Size.  
Reg. No. in Q.M. : I. 13/1074.

A. R. McCulloch, del.



edged and tipped with dusky; a blackish spot in the axil of the pectoral. (*darnleyense*, belonging to Darnley Island.)

Described from four specimens, measuring from 145 to 222 millim., collected at Darnley Island by Dr. J. R. Tosh. Reg. No. of type in Queensland Museum, I.13/1074.

## POMACENTRIDÆ.

### GLYPHISODON Lacépède 1802.\*

#### GLYPHISODON PALMERI sp. nov.

(Plate XXII, fig. 2.)

Depth of body 1.66 to 1.7, length of head 3.4, of longest dorsal ray 3 to 3.15, of longest anal 3.15 to 3.25, length of caudal 2.7, of pectoral 2.7 to 2.75, of ventral 2.55 to 2.8 in length of body. Depth of peduncle 1.65 to 1.7, length of snout 3 to 3.2, diameter of eye 3.2 to 3.25, width of interorbit 2.8 to 2.9, longest dorsal spine 1.55, longest anal 1.55, middle caudal rays 1.45, length of ventral spine 1.66 in length of head.

Body elevated, the dorsal contour evenly arched from the nape to the middle of the soft dorsal, beyond which it descends somewhat abruptly to the peduncle; ventral contour as evenly but more deeply arched from the isthmus almost to the peduncle, the depth of which is 3.4 in that of the body. Head one fourth deeper than long, its upper profile linear and strongly acclivous, forming an obtusely rounded angle with that of the nape. Snout short, much broader than long, rounded anteriorly, its length one tenth more than the eye and a trifle less than the strongly convex interorbital width. Cleft of mouth small and oblique, the maxillary extending to slightly beyond the vertical from the nostril, which is on a level with the middle of the eye and nearer to it than to the tip of the snout. Teeth in a single series, broad, compressed, and incisor-like, with the cutting edge emarginate; free tip of tongue rounded. Infraorbital ring narrow, its depth below the middle of the eye 4, that of the preorbital 2.7 in the eye-diameter, which is 1.15 in that of the inferiorly rounded cheek.

Scales in 28 transverse series between the angle of the opercle and the root of the caudal, in 18 horizontal series between the base of the dorsal and the vent, 5 of which are above the lateral line; cheek-scales in 4 series; infraorbital ring scaly throughout its entire length; scales of upper surface of head extending forward to between the nostrils, leaving the rest of the snout and the lower jaw naked. Lateral line with 20 or 21 tubular scales, ceasing below the middle of the soft dorsal, the

\* I am unable to accept Forskal's *Abudefduf*, both because of its manifest barbarity, and because I cannot believe that a writer so enlightened, and so far in intellectuality beyond his immediate colleagues, ever intended that it should be used generically; but rather employed it as a stop-gap until he should decide on a more suitable name, similarly as other Arabian vernacular names were used by him. (See Jordan & Snyder, Proc. U. S. Nat. Mus., xxiv, 1902, pp. 606-7). I am authorized to state that Mr. McCulloch is in perfect agreement with me on this point.

tubes profusely branched, and, except a few posteriorly, not extending to the border of the seale; accessory scale of ventral long and lanceolate, longer than the eye-diameter.

D. xiii 14; A. ii 14; P. 19. Last dorsal spine longest, 1.66 in the fifth and longest soft ray; length of soft portion of fin 2.05 in that of the spinous, its outer border acutely pointed, extending to above the middle of the caudal fin. Caudal forked, with broadly rounded lobes, the middle rays 1.85 in the upper and longer lobe. Anal fin conterminous with the dorsal, the second spine as long as or longer than the last dorsal spine and 1.66 in the sixth and longest ray, which, though as high or nearly as high as the soft dorsal, does not reach so far back. Pectoral fin one fourth longer than the head, the fourth ray longest, reaching to the tenth or eleventh body-scale. Ventral nearly as long as to a little longer than the pectoral, the outer ray produced, extending nearly to slightly beyond the origin of the anal, and twice as long as the spine.

Gill-rakers 5 + 12, rather short and stout, the inner margin spinulose, the longest 3.5 in the eye-diameter and 2.2 in the longest fringes.

Upper surface of body plumbeous or greenish gray, shading gradually on the sides into the silver-gray of the belly, many of the scales above the lateral line with a more or less conspicuous silvery spot or vertical bar; body with seven black cross-bands, the first from the nape to the axil of the pectoral; the second from the bases of the first and second dorsal spines, behind the base of the pectoral, to the abdomen; the third from the fifth and sixth spines beneath the third quarter of the appressed pectoral; neither of these two cross the ventral surface; the fourth from the ninth and tenth spines below the tip of the pectoral to the vent, these three encroaching on the dorsal fin; the fifth between the last dorsal spines and the anterior anal rays; the sixth between the last dorsal and anal rays, on both of which it extends; and the last and least conspicuous, which forms a complete ring round the peduncle immediately in front of the caudal fin, and is chiefly noticeable as two black pre-caudal spots, the one on the upper the other on the lower edge of the peduncle. Head and throat like the back, with scattered silvery spots and bars, which sometimes, especially below, almost obliterate the ground color. Iris dark blue. Dorsal, anal, and ventral fins black, with the base and, in the case of the two former, the produced rays lilaceous gray, as also are the caudal and pectoral fins. (Named for my friend Mr. James Palmer, chief of the telegraph station at Bulwer, M.B.,\* and one of my best and most enthusiastic collectors.)

Total length to 170 millimeters.

*Range (as at present determined)* :—Moreton Bay and its immediate neighbourhood.

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\* The Moreton Bay Telegraph Station has just lately been removed from Bulwer to Cowan Cowan, and I seize this opportunity to wish Mr. and Mrs. Palmer all happiness and success in their new home, which will, let us hope, prove as fertile a collecting ground as that which they have now left.

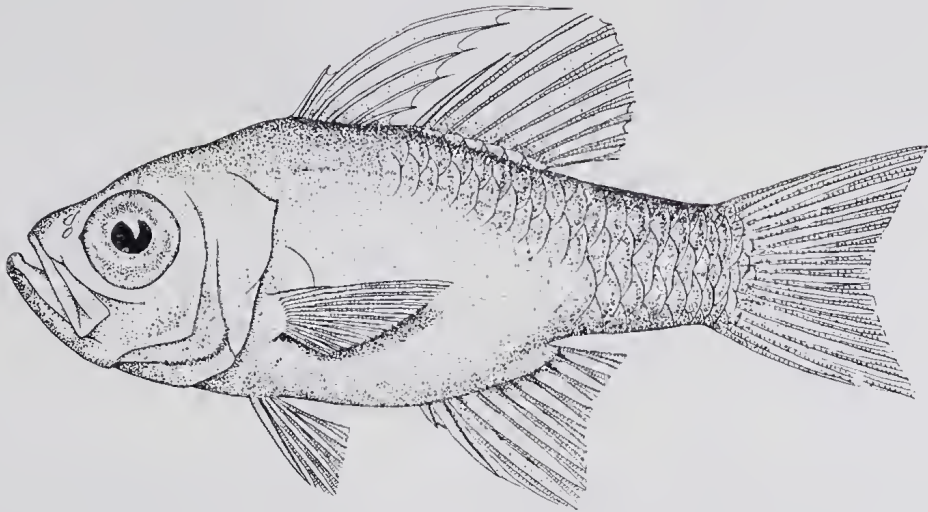


Fig. 1.—*AMIA NEMATACANTHA* Ogilby. Drawn from Type:  $2\frac{1}{2}$  Nat. Size.  
Reg. No. in Q.M.: I. 13/1273.

*D. B. Fry, del.*

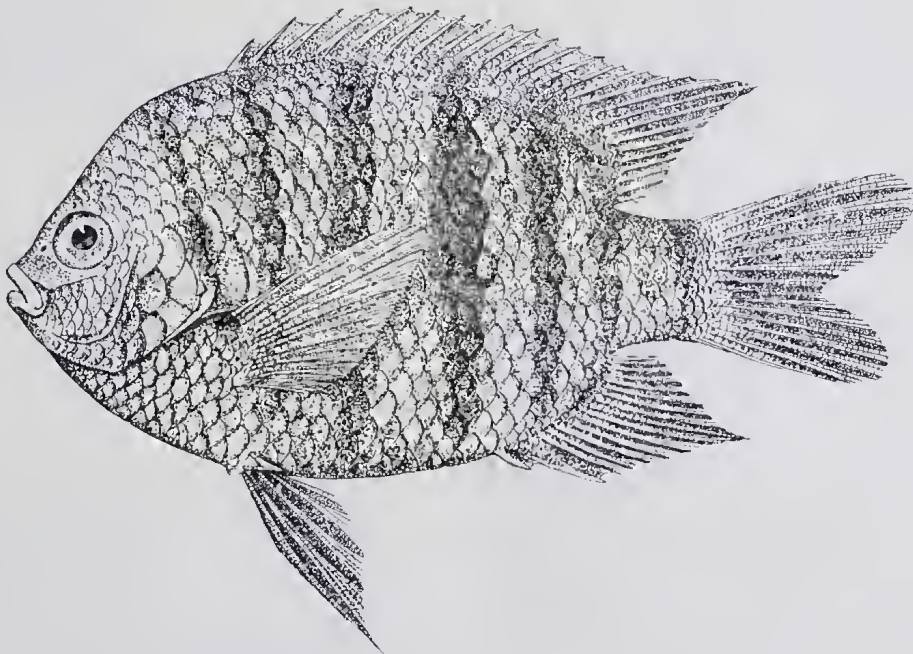


Fig. 2.—*GLYPHISODON PALMERI* Ogilby. Drawn from Type:  $\frac{2}{3}$  Nat. Size.

*D. B. Fry, del.*

Reg. No. in Q.M.: I. 13/1059.

Described from two specimens, 160 and 170 millim. in respective length, taken at Bulwer, Moreton Bay, by Mr. James Palmer. The larger, which I have selected as the type, is in the collection of the Queensland Museum, Reg. No. I. 13/1059; the smaller, a topotype, in that of the A.F.A.Q.

The only other specimen of which I have any definite knowledge is in the Australian Museum, Sydney, and of this McCulloch, in answer to a letter in which I forwarded a copy of the above description, writes—"The third is 50 millim. long from Caloundra. It is certainly your fish, and Waite also called it *G. bengalensis*?" In an earlier part of the same letter he says, of three specimens in that collection—"The largest, about 130 millim. long, is named *G. affinis* Günther, and is from Batavia. It is part of the Day collection and was originally labeled *G. sordidus*, which it is not; I do not know who determined it as *affinis*, but it agrees with the description of that species. It is well represented by Bleeker's figure, which he calls *G. bengalensis*, but is quite different from Day's figure of this last species. The second is 65 millim. long, and is from Sweer's Island, Gulf of Carpentaria. I have little doubt that it is the young of the other though the positions of the fifth and sixth bands are a trifle different, being more like your sketch. Waite determined it as *G. bengalensis*?"

From all this it is clear that there was considerable doubt in Waite's mind as to the identity of the three Australian Museum specimens, at which perhaps little wonder need be expressed, considering the confusion which evidently exists between the identifications of Günther, Bleeker, and Day.

It is plain that the Moreton Bay fish needs only to be compared with three species—*Glyphisodon septemfasciatus* Cuvier & Valenciennes,\* *G. bengalensis* Bloch,† and *G. affinis* Günther,‡ the type localities of which are respectively "l'Isle de France," "East Indies," and "China." Leaving aside the difference in the pattern of coloration, which applies equally to all three species, the first may be at once dismissed because of its much shallower body, larger head (4 to 4.25 in total length, *fide* Bleeker and Day, as against 4.6 in my type), the much larger naked area on the upper surface of the head, as described by Günther but not as figured by Bleeker, which more closely approaches to that described above, the pointed caudal lobes, etc., etc.

From the *G. bengalensis* and *G. affinis* of Günther's Catalogue our species differs among other characters in the much narrower infraorbital ring and the larger number of scales in a transverse series. In the former character it is more in agreement with Day's figure of *G. caelestinus* and Bleeker's of *G. bengalensis*. As a matter of fact these three authors have between them so inextricably confused the transversely banded glyphisodonts that a critical examination of numerous specimens from various localities has become urgently necessary.

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\* Hist. Nat. Poiss., v, 1830, p. 463.

† Ausl. Fisch., pl. ccxiii, fig. 3.

‡ Brit. Mus. Catal. Fish., iv, 1862, p. 41.